



# ***SoundWorks® Radio 820HD***

*High Performance AM/FM Radio With HD Radio™ Technology*

*User Manual*



**CAMBRIDGE  
SOUNDWORKS®**

A CREATIVE® Company

## WARNING

**TO PREVENT FIRE OR SHOCK HAZARD, DO NOT USE THIS PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE**

**TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

### CAUTION

**RISK OF ELECTRIC SHOCK  
DO NOT OPEN**

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The exclamation point within an equilateral triangle, is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding plug-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 13) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 14) The appliance shall not be exposed to dripping or splashing water and that no object filled with liquid such as vases shall be placed on the apparatus.

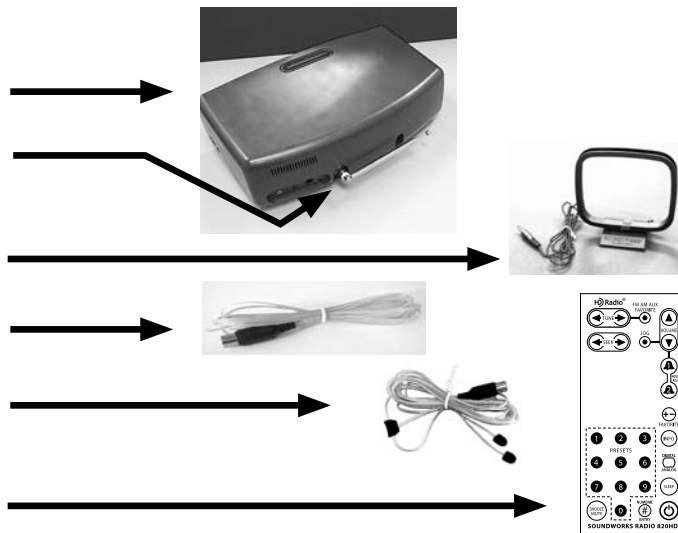
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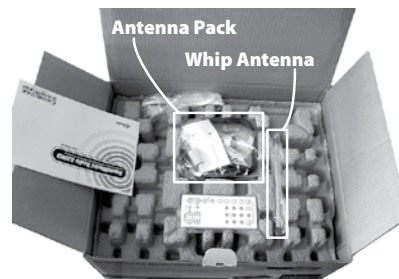
## Product Carton Contents

- 1) SoundWorks Radio 820HD
- 2) FM telescoping whip antenna (packed separately, shown attached to radio)
- 3) AM loop antenna
- 4) FM external wire antenna
- 5) FM external dipole antenna
- 6) Infrared remote control



## Setup

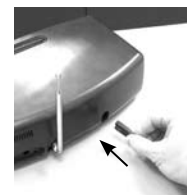
- 1) Locate and remove the Antenna Pack and the Whip Antenna from the carton. Remove the Antenna Connection leaflet, the AM antenna, the FM wire antenna and the FM dipole antenna from the Antenna Pack.



- 2) Refer to the Antenna Connection leaflet. Choose and connect an FM Antenna. Position the FM antenna. Connect and position the AM antenna.



- 3) Insert the AC cord.



***FIRMLY push the AC cord connector into the back panel socket.***

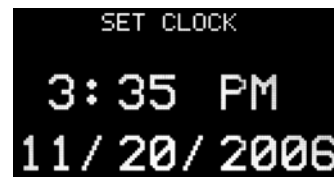
- 4)** Place the radio in its intended location.  
Connect the AC plug to a 120 VAC outlet.



- 5)** Press the Power button.  
You can now set the date and time.

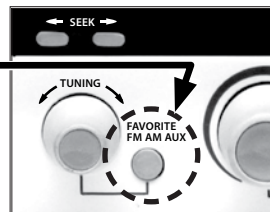


- 6)** To reach the date and time adjustment screen:  
First press and hold the JOG button until you see  
"HD RADIO & ANALOG" on the display.  
Then briefly press the JOG button three more times  
to reach the "SET CLOCK" screen.  
Use the VOLUME control to make an adjustment,  
then press the JOG button again to reach the  
next Date and Time value. Repeat this process  
for each Date and Time values.  
After the last value is set, either wait for the screen  
to return to normal radio operation, or press the  
JOG button until you see the normal radio display.



## Radio Operation

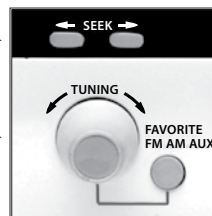
- 1) Select the FM or AM band by pressing the AM/FM/Aux button on the front panel or the remote control.



- 2) Tune stations using TUNE or SEEK (faceplate or remote). See page 8 for more information.

### *Numeric Entry Tuning (remote control only)*

Press the NUMERIC ENTRY button, then enter the station frequency using the PRESET numbered buttons.

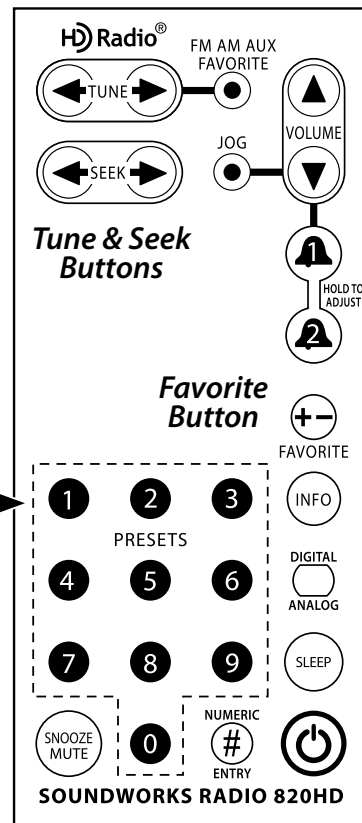
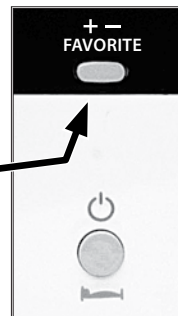


### *Preset Button Assignment*

- 3) If desired, store ten radio stations (either AM or FM) for immediate recall. While tuned to the station, press and hold down a PRESET button on the remote control for at least two seconds. The display will confirm the station is stored.

### *Favorite Assignment*

- 4) Besides using the ten PRESET buttons on the remote control, you can assign an additional twenty stations to appear in the FAVORITE organizer band. See the next page for a description of its operation.



## FAVORITE Organizer Band Operation

The Favorite band organizes up to thirty of your favorite stations. It combines the stations you assign to the Remote Control numeric keypad as *Presets* with up to twenty additional *Favorite* stations. The Favorite band always places these stations in their frequency order, with FM stations followed by AM stations.

With the FAVORITE band selected, each click of SEEK or TUNE navigates among your favorite stations. The Favorite band expands or contracts as you add or remove a Preset or Favorite station. Second or Third streams of an HD Radio multicast can also be assigned Favorite status.

- 1) Each station assigned as a PRESET is included in the FAVORITE band. If you assign ten stations to the remote control's PRESET buttons, you already have a ten station FAVORITE band.



*Indicates the FAVORITE band is selected*

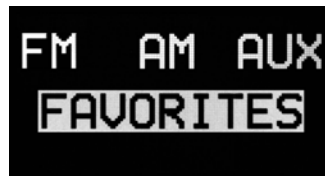
*Indicates the fifth of twenty-two Favorite stations is selected.*

- 2) Besides your PRESET selections, you can assign up to twenty additional AM and FM stations as Favorites. Tune to a station that isn't already assigned to a Preset button, then press and hold the FAVORITE button (front panel or remote) for over two seconds. The display confirms Favorite assignment.



*Confirmation of stored Favorite*

- 3) To remove Favorite status from a station, simply tune to that station, then press and hold the FAVORITE button for more than two seconds. The display confirms removal of Favorite assignment.



*Selecting the FAVORITE Band*

- 4) To use the Favorite band, select it using the AM/FM/Aux button.

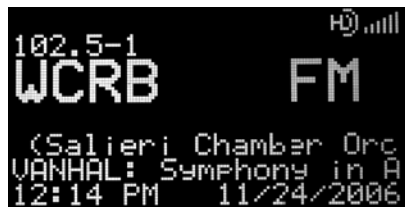
## Technical Information

### Receiving HD Radio™ broadcasts:

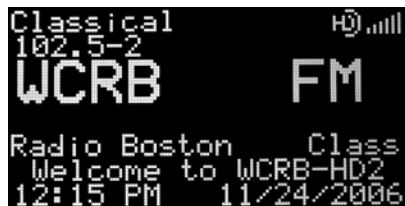
A broadcast with an HD Radio™ digital signal does not immediately start to play when you tune to the station's frequency. The receiver builds up a reserve of digital information before it starts playing the audio. This digital signal reserve insures the audio program isn't affected by temporary drops in the strength or quality of the received signal.

Once the digital signal starts to play, the radio will also show whether the station is broadcasting more than one program, called a "multicast".

*The "-1" after the frequency shows this is the first program in a multicast.*



*The "-2" after the frequency shows this is the second program in a multicast.*



### ANALOG ONLY MODE:

It is possible a station's broadcast with HD Radio™ technology has insufficient signal strength at your location for a consistent lock on the digital broadcast stream. If this is the case, the station would switch periodically between digital and analog reception.

To listen to this station with a consistent signal, select Analog Only mode in the JOG menu.

Analog Only mode applies to all stations. You will have to select "HD Radio and Analog" to restore digital reception if you switch to a different stronger, HD Radio™ compliant broadcast.

### Automatic "Analog Only" status

If you frequently listen to a station with insufficient signal strength for consistent reception of an HD Radio™ broadcast, store the station as a Preset or Favorite while the "Analog Only" mode is active. Then switch to another station and restore the radio to "HD Radio and Analog" mode.

Now, every time you select the weaker station via the Preset button or the Favorite band, the radio will automatically engage Analog Only mode. Tuning to a different station will restore "HD Radio and Analog" operation.





## Quick Reference Faceplate and Remote Control

All Faceplate controls are also  
on the Remote Control.

### HD Radio™ Program Stream indicator

When visible, the current program  
uses HD Radio™ technology.

### HD CARRIER LIGHT

When this HD symbol is visible,  
there is an HD Radio™ digital  
stream within the broadcast signal.

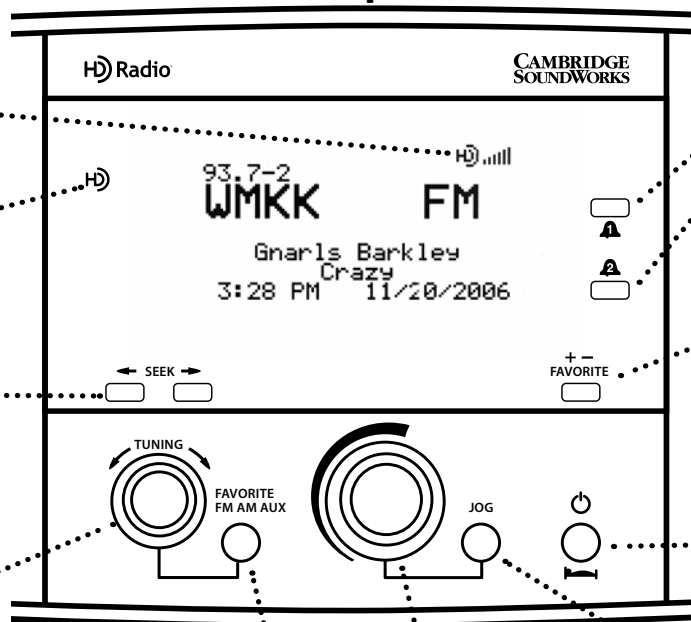
### SEEK

If the AM band or FM Band is active,  
these buttons tune to the next broadcast  
(multicast streams within an HD broadcast  
are skipped). If the Favorite Band is active,  
these buttons move to the next Favorite  
(broadcast or multicast stream).

### TUNING

If the AM or FM band is selected, adjust this  
knob to tune the radio frequency or to the  
next stream within an HD Radio multicast.  
If the Favorite band is selected, adjust to  
select among Favorites (broadcasts or  
multicast streams).

## Faceplate



### SOURCE

Push repeatedly to select the  
FM, AM or Favorite bands or  
the Aux input.

### VOLUME

In normal operation, this knob adjusts  
volume output.  
In a JOG or ALARM adjustment mode,  
this knob selects various radio and  
mode settings.

## ALARM 1, ALARM 2

**Push and quickly release** either button to activate Wake to Music Alarm, Wake to Tone Alarm or No Wakeup.

**Push and hold** either button for two seconds to engage alarm setting adjustment. Alternate between the Volume control and the alarm button to make adjustments.

## FAVORITE

While the AM or FM band is selected, push and hold this button for two seconds to assign FAVORITE status to a station.

If the current station already holds Favorite status, push and hold this button to remove FAVORITE status.

## POWER/SLEEP

Press and quickly release once to select On or Standby.

Rapid, repeated pushes engages a timed shutoff mode (**SLEEP**).

## JOG [see page 10 for complete menu listings]

**Press quickly** to enter the adjustment mode for the primary radio settings.

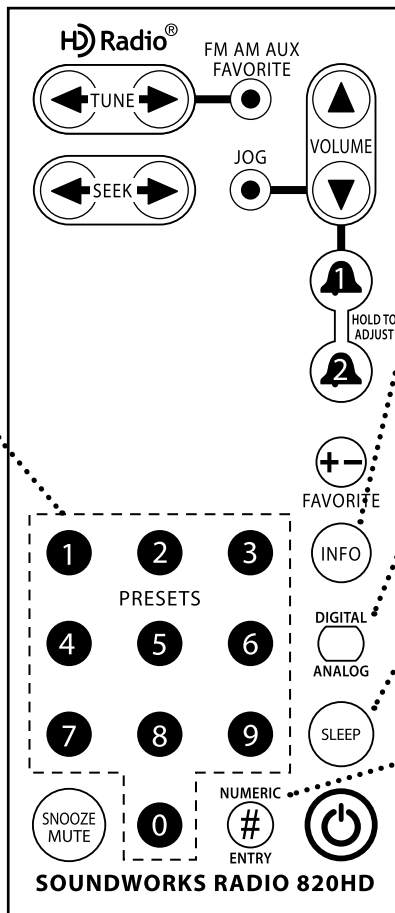
**Press and hold** to enter the adjustment mode of the secondary radio settings. Alternate between the Volume control and the JOG button for adjustments.

## Remote Control

The designated buttons are unique to the Remote Control. The other buttons function like the controls on the Faceplate.

## PRESETS/KEYPAD

Press and hold any of these buttons to store a station for immediate recall. Press briefly to recall the station.



## INFO

Pressing this button displays useful information briefly or starts the Audio Display. In sequence, this button shows:

- \* Alarm settings (if an alarm is activated)
- \* The date and time
- \* Enables or disables the Audio Display.

## ANALOG/DIGITAL

This button switches between analog only operation and automatic analog/digital radio operation.

## SLEEP

Sleep mode automatically turns the radio off after a user-determined interval. Repeated presses of the button increase the interval in 15 minute increments.

## NUMERIC ENTRY

Press this button, then enter a station frequency using the PRESET buttons as numbers. The radio chooses AM or FM based on the frequency.

## Additional Information

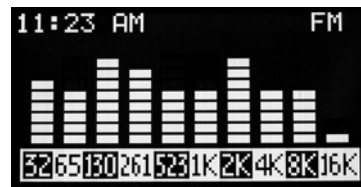
### 1) Audio Display:

This feature displays a radio broadcast's audio spectrum. It shows the intensity of the audio at ten different frequency bands. Once engaged, the Audio Display becomes the default screen. Any control action will replace the Audio Display until five seconds after the last control input.

Use the INFO button on the remote or a "press and hold" of the JOG button on the radio faceplate to engage or disengage the Audio Display feature. Entering Standby also disengages the Audio Display.

The Audio Display is only active on radio station audio. It does not show a spectrum of the AUX input signal.

**AUDIO  
DISPLAY**



### 2) JOG menu


After a *brief* press of the JOG button, the following choices can be made by further brief presses of the JOG button:


- Bass & Treble adjustment
- Display Text (Fixed, Scrolling, Station ID only, None)
- Favorites Mode (Enabled, Disabled, Clear All)
- Audio Display (Enabled, Disabled)

After a *press and hold* of the JOG button, the following choices can be made by further brief presses of the JOG button:

- HD Radio And Analog, Analog Only
- Set Snooze (5 to 55 minutes)
- Loudness (On, Off)
- Set Clock (and date)
- Contrast (-4 to +4)

### 3) Headphone Jack, Auxiliary Inputs:

The side-mount headphone jack  accepts any headphone with a 3.5 mm stereo miniplug.


The side-mount auxiliary input  accepts a 3.5 mm stereo miniplug. Use it with all portable audio devices. This input takes precedence over the rear auxiliary input.



NOTE: Headphone use mutes the speakers

## Additional Information Continued

### 3) Rear Input Configuration:

The rear auxiliary input  accepts a 3.5 mm stereo miniplug. Use it with all portable audio devices.

The **12 VDC OUT** can be used with special accessories, like a Cambridge SoundWorks portable audio player dock.

The **OPT DIGITAL OUT** provides a SPDIF-compliant audio signal of the tuner output.



## Alarm Features

The SoundWorks Radio 820HD has two independent wakeup alarms.

### ACTIVATION

Each alarm can be set to Wake To Music or Wake to Tone (a beep sound) using the Alarm 1 and Alarm 2 buttons.

### RESET

Once either alarm activates, *reset* the alarm by pressing either the *Alarm 1* button, the *Alarm 2* button or *Power*.

### SNOOZE

The Snooze bar silences the wakeup alarm for a user-determined interval. The wakeup alarm reactivates after the *snooze* interval.

### DAILY PATTERN

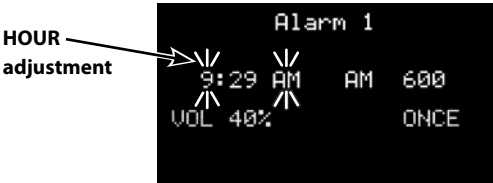
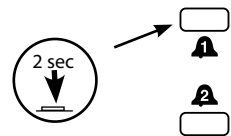
Each alarm can be programmed to activate in a daily pattern. The four daily patterns are Once, Daily, Weekday (Monday through Friday) and Weekend (Saturday and Sunday).

The first section of *Alarm Operation* explains how to adjust each alarm. The adjustments are wakeup time, radio band and frequency, music wakeup volume and daily pattern.

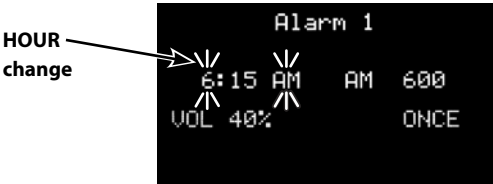
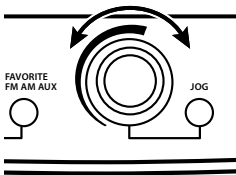
The second section of *Alarm Operation* explains how to quickly choose the Alarm Activation mode (**music wakeup**, **tone wakeup**, or **no wakeup**) using the Alarm buttons.

**Alarm Operation 1 - Wakeup Settings Adjustment**

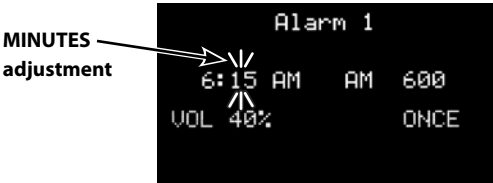
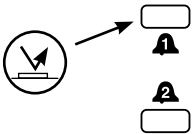
- 1) Press and hold down either Alarm button for two seconds. The radio switches to the HOUR adjustment display.



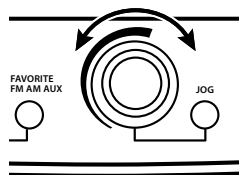
- 2) Adjust VOLUME to select the desired hour.



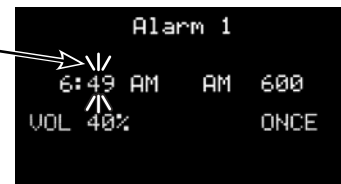
- 3) Tap the Alarm button again to move to the MINUTES adjustment display.



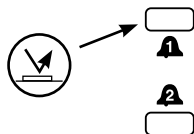
- 4) Adjust VOLUME to select the desired MINUTES setting.



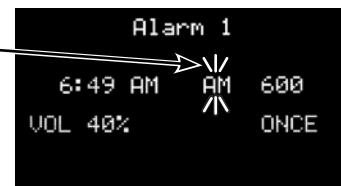
MINUTES  
change



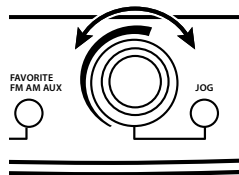
- 5) Tap the Alarm button again to move to the BAND adjustment display.



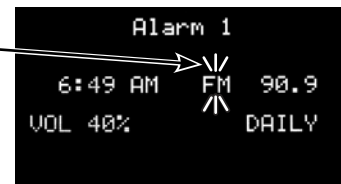
BAND  
adjustment



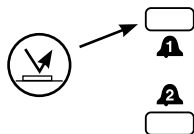
- 6) Adjust VOLUME to select the band of a wakeup station.



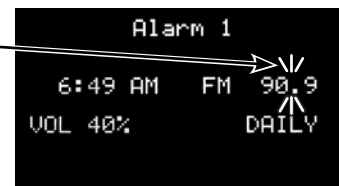
BAND  
change



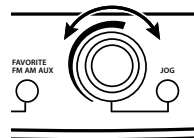
- 5) Tap the Alarm button again to move to the FREQUENCY adjustment display.



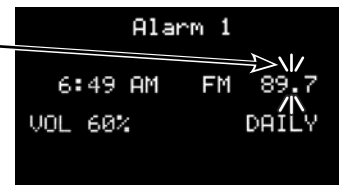
FREQUENCY  
adjustment



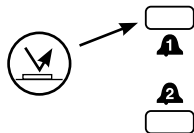
- 6) Adjust VOLUME to select the frequency of a wakeup station.



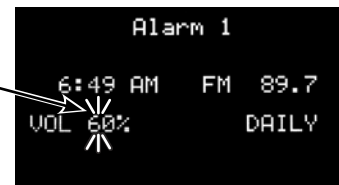
FREQUENCY  
change



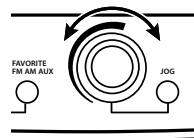
- 7) Tap the Alarm button again to move to the WAKEUP VOLUME adjustment display.



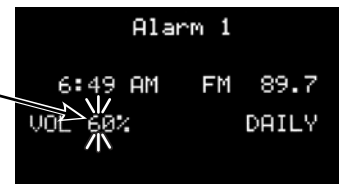
WAKEUP  
VOLUME  
adjustment



- 8) Adjust VOLUME to select the desired wakeup volume.

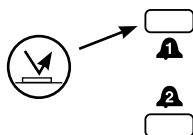


WAKEUP  
VOLUME  
change

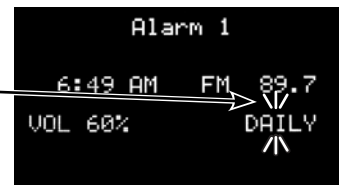




- 9) Tap the Alarm button again to move to the DAILY PATTERN adjustment display.



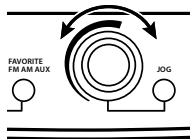
DAILY  
PATTERN  
adjustment



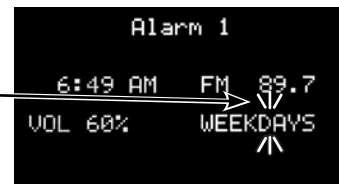
- 10) Adjust VOLUME to select the desired daily alarm repetition.

### *Daily Alarm Options*

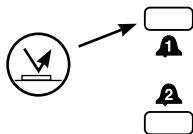
Daily: Alarm sounds every day.  
Weekdays: Alarm sounds every Mon, Tue, Wed, Thu, Fri.  
Weekend: Alarm sounds every Sat, Sun.  
Once: Alarm sounds once, then cancels after reset.



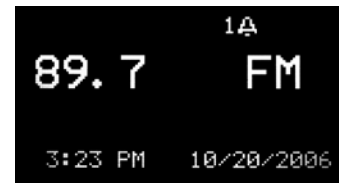
DAILY  
PATTERN  
change



- 11) Tap the Alarm button again to complete the alarm adjustment session.

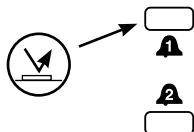


NORMAL  
DISPLAY



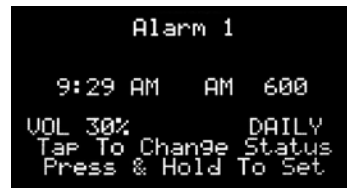
## Alarm Operation 2 - Alarm Activation

- 1) Press and quickly release either the Alarm 1 or the Alarm 2 button ("tap" the button). The radio switches to the Alarm Activation display.

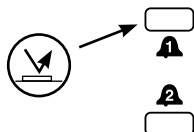


*first tap*

**ALARM  
ACTIVATION  
display**

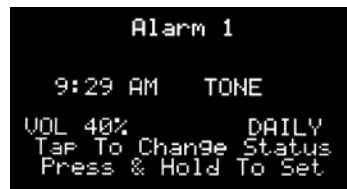


- 2) While the display is visible, continue to use the Alarm button to choose between Music Wakeup alarm, Tone Wakeup alarm and NO alarm.



*second tap*

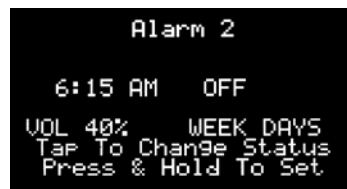
**TONE  
WAKEUP  
display**



- 3) Once you see the desired Alarm Activation mode on the display, wait five seconds. The radio will store your request and return the radio to normal operation.

*third tap*

**ALARM  
OFF  
display**



*WAIT five  
seconds after  
your choice*

**NORMAL  
operation**



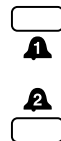
## Alarm Operation 2 - Alarm Reset and Snooze

### RESET

Once either alarm activates, *reset* the alarm by pressing either the *Alarm 1* button, the *Alarm 2* button or *Power*.

These buttons reset a  
Wakeup Alarm

Faceplate



Remote  
Control



### SNOOZE

The Snooze bar silences the wakeup alarm for a user-determined interval. The wakeup alarm reactivates after the *snooze* interval.

**SNOOZE / MUTE**

